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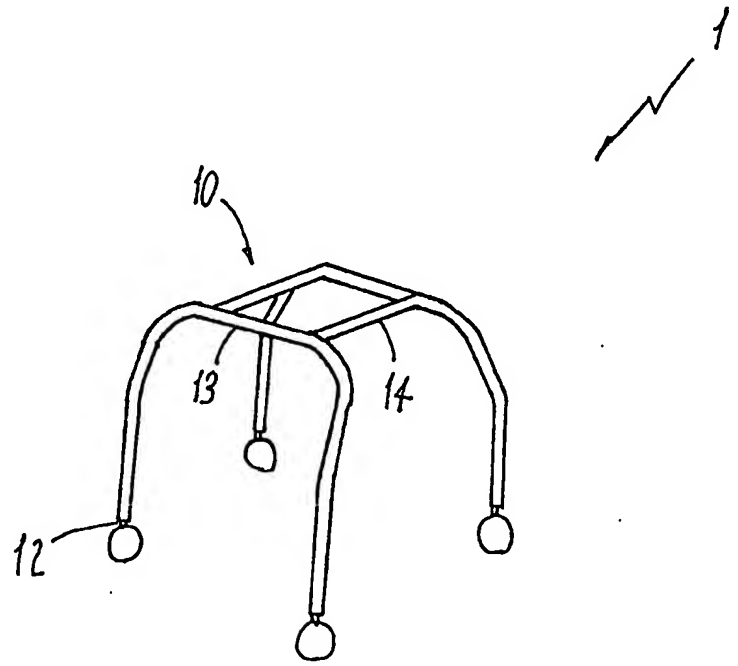
(54) Title: A BEARING STRUCTURE FOR A CHAIR, A DESK CHAIR, A STOOL OR SIMILAR

(57) Abstract

A bearing structure for a seat, a desk chair, a stool or similar, comprised of a frame body (10), to which the closest ends (7) of a plurality of elongated legs (2) are attached, each furthest end (9) having a corresponding wheel (6) and being separated from the other furthest ends (9) by a distance which is greater than that between the closest ends (7) to allow the stacking of several bearing structures one on top of the other.



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Description

A bearing structure for a chair, a desk chair, a stool or similar

Technical Field

The present invention relates to a bearing structure for a chair, a desk chair, a stool or similar. For reasons of clarity, the said item of furniture shall be indicated in the current description, by the single term "chair". The object of the invention is also a chair comprising the said bearing structure.

Background Art

It is known that chairs and similar items of various types and with various characteristics have been used and marketed for a long time and, in their simplest form, are comprised of a seat supported by a structure which, in general, is comprised of four legs. Of course, there are some examples of chairs which have a different number of legs for technical, aesthetic or other reasons. In certain areas of use, it is particularly useful to manufacture chairs which can be stacked one on top of the other. Chairs of this kind generally have sloped legs, for example, those formed with a pair of inverted V-shaped legs. The possibility of stacking different chairs one on top of the other is particularly advantageous feature if the chair is to be used in bars or restaurants or even in homes, and in any case, any time it is necessary to collect them up in a limited space. In totally different areas of use, for example, in offices, the chairs being part of the commonly known technique, are fitted with wheels to facilitate the movement of a person when seated. A frequently used embodiment involves the creation of a single central leg from which a certain number of feet, generally five, branch out. The said feet have wheels connected to their ends in such a way that they can rotate.

Naturally, such an embodiment of the legs excludes the possibility of stacking the chairs which are usually fitted with wheels. In parallel, the form of the legs of commonly known stackable chairs make it difficult and burdensome to add wheels to the said chairs and, however, makes it impossible to use wheels of the standard type commonly available on the market.

Disclosure of Invention

The applicant of this present application has identified the need to introduce a chair which combines the characteristics of stackability and mobility on wheels into the market.

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The aim of this present invention is, therefore, to produce bearing structures for chairs which can be mobile because of the presence of wheels and, at the same time, can be stacked one on top of the other.

A further aim of the invention is to produce a bearing structure which is both simple and cheap to manufacture.

Another aim of the invention is to produce a bearing structure fitted with wheels which are commonly available on the market, to make them still more easily and quickly available.

A further aim of this invention is to produce a bearing structure which is safe and reliable.

These and other aims are incorporated in a bearing structure for a chair, desk chair, stool or similar, comprising a frame body to which the closest ends of a plurality of elongated legs are attached, said legs being characterised by the fact that there is a wheel mounted to each furthest end of the elongated legs, said furthest ends being separated one from the other by a distance greater than that between the closest ends to allow the bearing structures to be stacked one on top of the other.

Further characteristics and advantages of the present invention will better emerge from the detailed description of a preferred embodiment that follows, in the form of a non limiting example, with particular reference to the figures of the accompanying drawings, in which:

figure 1 is a perspective view of a bearing structure according to the invention

figure 2 is a perspective view of the bearing structure of figure 1 which is supporting a chair comprised of a seat and back-piece.

With particular reference to the figures mentioned, the bearing structure, according to the invention, indicated as a whole by the number 1, has four elongated legs 2, connected to a frame body 10. The legs are, preferably but not exclusively, produced using a single tubular piece for the pair of front legs and a single tubular piece for the pair of back legs.

Attached to the frame body 10 are the seat structure 3 and, in particular, the piece comprised of the seat 4 and the back-piece 5 of a chair.

Each leg has a closest end 7 attached to the frame body 10 and a furthest end 9 which a respective wheel 6 is connected to. The wheels 6, of a type commonly available on the market, are connected to the legs by a pivot pin 12 inserted into a housing on the furthest end 9 of each leg; the pins 12 allow the wheels 6 to rotate around an axis which is perpendicular to the supporting surface, in this way facilitating the mobility of the chair.

The form of the legs 2 is designed to allow the chairs to be stacked one on top of the other. With this aim in mind, the distance between the furthest ends 9 is greater than the distance between the closest ends 7.

Furthermore, the furthest ends 9 of the legs are produced practically parallel with each other and in particular perpendicular to the supporting surface to allow pins 12 of the wheels to be inserted easily into the housings on the legs. Each leg 2 has a middle section 8 placed between the furthest end 9 and the closest end 7 which is sloping in relation to both of the said ends and converges towards the frame body 10. In another embodiment of the invention, the closest end 7 and the sloping middle section 8 coincide.

The frame body 10 is preferably, but not exclusively, comprised of initial transversal elements 13, each one, for example, forming an integral part with a pair of legs, and second longitudinal elements 14 integral with the transversal elements 13.

In further embodiments of the structure, the longitudinal elements 14 are connected in a permanent way, for example welded, to the transversal elements 13. However, a different type of connection is possible, in particular a dismountable one, which can be made using bolts or similar elements of a commonly known technique.

The folded areas 11, which mark out the various zones comprised of the single legs 2 are rounded for aesthetic, technical and safety reasons.

In practice, it was noted that the structure according to the invention proved to be particularly advantageous for the production of a swivel chair. The said structure was also decidedly convenient in use since it is fitted with wheels and, at the same time, can be stacked on top of other chairs of the same type. The said structure is therefore suited to all uses in which, if the said chair is not needed, it can be placed with others where it is not possible or it is undesirable for it to take up space.

In practice, the materials used, as well as the dimensions, can be suited to fit the needs and the technology.

Obviously, by maintaining the principle of the present invention, various embodiments are possible and the relevant details can be varied widely with respect to this description and its illustration without falling outside the field of the present invention.

Claims.

1. A bearing structure for a chair, a desk chair, a stool or similar, comprised of a frame body (10), attached to which are the closest ends (7) of a plurality of elongated legs (2) wherein a corresponding wheel (6) is mounted on the furthest ends (9) of each elongated leg (2), the furthest ends (9) being separated by a distance which is greater than that between the closest ends (7) to allow the stacking of several structures one on top of the other
2. A structure according to claim 1 wherein the said furthest ends (9) are practically parallel in relation to each other.
3. A structure according to claim 2 wherein the said legs (2) include middle sections (8) adjacent to the furthest ends (9) and sloping in relation to these latter, the middle sections (8) converging as a whole towards the frame body (10)
4. A structure according to claim 1 wherein the wheels (6) pivot around an axis
5. A structure according to claim 4 wherein the said wheels comprise a pivot pin (12) and the pin (12) can be selectively engaged in a housing made on the furthest end (9) of the elongated leg (2)
6. A structure according to any of the previous claims wherein the said elongated legs (2) are at least partially tubular
7. A structure according to any of the previous claims characterised in that it comprises four elongated legs (2)
8. A bearing structure for a chair, a desk chair, a stool or similar, according to these descriptions and illustrations and specific aims
9. A chair, desk chair, stool or similar, characterised in that it comprises a seat (4) mounted on a bearing structure according to any of the previous claims.

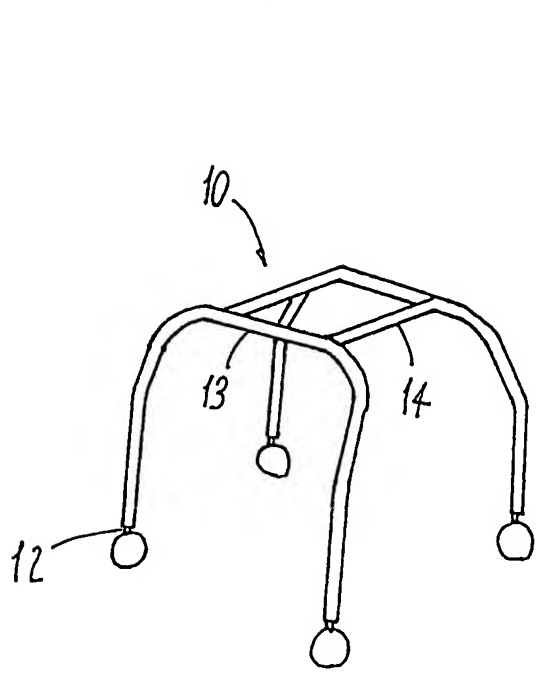

FIG 1

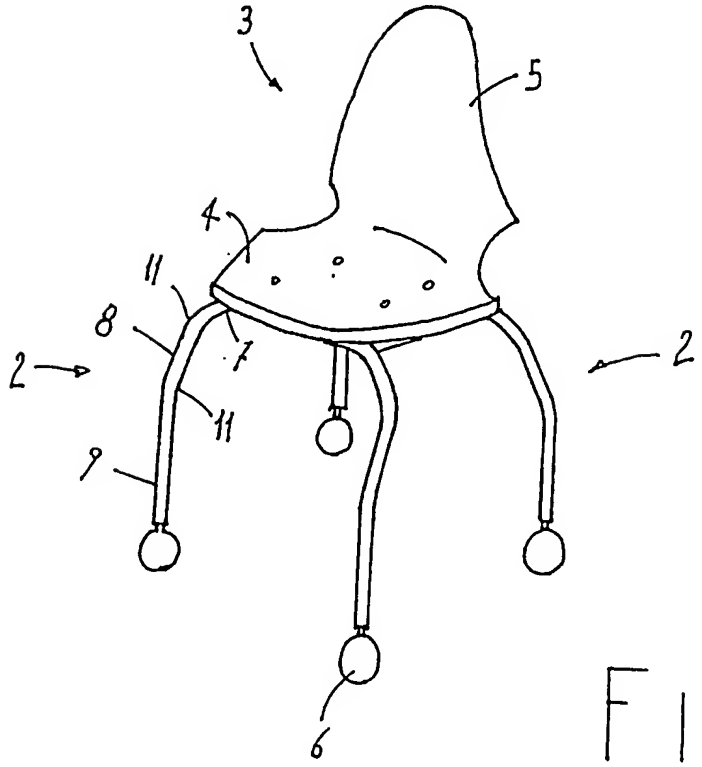

FIG 2

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INTERNATIONAL SEARCH REPORT

Im tional Application No
PCT/EP 98/07856

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A47C3/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 A47C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 057 288 A (SCHWARTZ) 8 November 1977 see the whole document	1-9

☐ Further documents are listed in the continuation of box C.

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Date of the actual completion of the international search	Date of mailing of the international search report
21 April 1999	28/04/1999

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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4057288 A	08-11-1977	NONE	